

C. Remarks

The claims are 1-16, with claims 1-3, 8-13 and 16 being independent. Claims 1-4 and 7-16 have been amended to set forth that dots of a single size are printed in the methods and apparatuses of the present invention. The amendments are fully supported by the application as filed, e.g., see page 18 and Figure 5; accordingly, no new matter has been added. Reconsideration of the present claims is respectfully requested.

Claims 13-16 stand rejected under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. In response, Applicants have amended each of claims 13 and 16 to replace “computer program product” with -- computer program product recorded on a storage medium--. Accordingly, Applicants submit that the Examiner’s §101 concern has been addressed and respectfully request withdrawal of the §101 rejection.

Claims 1-16 stand rejected under 35 U.S.C. §102(e) as being anticipated by Fujimori (U.S. Patent No. 6,783,203). Applicants respectfully traverse this rejection.

The claimed invention relates to methods and to a printer which record an individual pixel of an image on a sheet with multiple scans by a printing head. A feature of the claimed invention is that a pattern used to determine which of the plurality of main scans is used to print one or more dots having a single size to be printed for a pixel of interest is assigned to the pixel of interest. Figures 6 and 18 show examples of the pattern defining which number of passes of the printing head records the target pixel. In Figure 6, for example, a pixel having level 2 and index number 3 is recorded by the third scan and the sixth scan (the number of scan is counted from upper left to lower right in a lateral direction). Such a pattern is assigned to each pixel of an image. The pattern assigned to a

pixel of interest is utilized to determine not only dot arrangement, but also to determine which number of passes record one or more dots having a single size for a pixel of interest. Thus, assigning a pattern to a pixel means determining the number of scans to record the pixel.

Fujimori discloses a method for reproducing gradation in an image using ink dots having different sizes, i.e., a large droplet, a medium droplet and a small droplet. According to column 8, lines 19-31, the small droplets are ejected in the first pass (PASS 1), the medium droplets are ejected in the second pass (PASS 2), and the large droplets are ejected in the third pass (PASS 3) for forming a main scan line. For the purpose of heightening a frequency of ink ejection, sizes of ink droplets ejected in each pass are preliminarily defined.

Clearly Fujimori is different from the present invention and, as a result, does not disclose each and every feature of the claimed invention. Fujimori describes recording passes for recording a main scan with dots having different sizes; according to the claimed invention, recording passes for recording a main scan with dots having a single size is determined. Beyond that, Fujimori discloses a printing method in which dots of one particular size are recorded in one pass; by contrast, according to the claimed invention, dots having the same size are recorded in multiple passes. Because of this feature of the present invention, dots having the same density on a line can be recorded by different nozzles. Thus, a nozzle (or head) character is unlikely to be seen in a recorded image, and differences between adjacent bands become obscure. According to Fujimori, although gradation presentation ability may be improved, differences between adjacent bands are not obscured.

For these reasons, Applicants submit that Fujimori does not anticipate the present invention. Simply put, Fujimori fails to disclose or suggest using a pattern to determine which of a plurality of main scans is used to print one or more dots having a single size to be printed for a given pixel. Accordingly, Applicants respectfully request withdrawal of the §102 rejection.

In view of the foregoing amendments and remarks, favorable reconsideration and passage to issue is earnestly requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

/Elizabeth F. Holowacz/
Elizabeth F. Holowacz
Attorney for Applicants
Registration No. 42,667

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200